

METHOD OF POWER STEERING HOSE ASSEMBLY DESIGN AND ANALYSIS

ABSTRACT OF THE DISCLOSURE

A method of power steering hose assembly design and analysis for a power steering system in a vehicle includes the steps of selecting a mesh model of a design for a power steering system, wherein the power steering system includes a power steering hose assembly having a noise attenuation device. The method also includes the steps of selecting a predetermined characteristic of the power steering system for a predetermined operating condition, performing an acoustic analysis on the mesh model using the predetermined characteristic and determining an acoustic response of the power steering hose assembly from the acoustic analysis. The method further includes the steps of determining a noise transmission loss across the power steering hose assembly using the acoustic response, determining whether the transmission loss meets a predetermined noise criteria and modifying a design parameter for the power steering system if the transmission loss does not meet a predetermined noise criteria or using a power steering hose assembly design and analysis if the transmission loss does meet a predetermined criteria.